

NOVEMBER/DECEMBER 2025

**FEEL64A/CEEL63A —
MICROCONTROLLER 8051 AND ITS
APPLICATIONS**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. What is PSW?
2. What are the functions of pins XTAL1 and XTAL2?
3. What is baud rate?
4. Write the priority of interrupts.
5. What is immediate addressing?
6. Give the example for rotate instruction.
7. What are called conditional jumps?
8. What is relative range?
9. What is intelligent alphanumeric display?
10. Define LCD.



SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) Describe the flags and PSW.

Or

- (b) Explain the internal ROM.

12. (a) Describe the modes of operation.

Or

- (b) Explain :

- (i) Interrupt priority
- (ii) Interrupt destination.

13. (a) Describe the rotate and swap operations.

Or

- (b) Write a program to move bit 4 of RAM location 30H to bit 2 of A.

14. (a) Explain the code memory and read only data move.

Or

- (b) Write a program to put a random number in R3 and decrement until it equals E1 H.

15. (a) Describe the interfacing of LCD display.

Or

- (b) Explain the A/D conversion.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Write a short note on :

- (a) Stack and stack pointer
- (b) Special function registers

17. Explain the timer/control logic with neat block diagram.

18. Describe the Addressing modes of 8051 microcontroller.

19. Explain the calls and subroutines.

20. Describe the stepper motor Interface.

